

## **Amendments to the Claims**

This listing of claims will replace all prior versions, and listing, of claims in the application:

### **Listing of Claims:**

1. (Currently amended) A computer-implemented method, comprising:  
  
determining if a portion of a backside defect detected on a backside of a specimen is opposite to a portion of the frontside defect detected on a frontside of the specimen; and  
  
correlating the backside defect with the frontside defect if the portion of the backside defect is determined to be opposite to the portion of the frontside defect.
2. (Original) The method of claim 1, wherein the portion of the backside defect is aligned with the portion of the frontside defect along an axis perpendicular to the frontside and the backside of the specimen.
3. (Original) The method of claim 1, further comprising generating a single visual representation of the specimen that illustrates the backside defect and the frontside defect with different formatting to visually differentiate the backside defect and the frontside defect.
4. (Original) The method of claim 1, further comprising identifying data representative of a signature of a chuck of a process tool within data generated during detection of the backside defect and removing the data representative of the signature of the chuck from the data generated during detection of the backside defect prior to said correlating.
5. (Original) The method of claim 1, further comprising generating visual representations of the frontside and the backside of the specimen, altering one of the visual representations such that

the altered visual representation appears as a mirror image of the one visual representation, and superimposing the altered and the unaltered visual representations to generate an overall visual representation of the specimen.

6. (Currently amended) The method of claim 5, wherein said determining comprises determining if the portion of the backside defect on the backside of the specimen is opposite to the portion of the frontside defect on the frontside of the specimen from the overall visual representation.

7. (Original) The method of claim 5, wherein the overall visual representation does not illustrate additional backside defects detected on the specimen and additional frontside defects detected on the specimen, and wherein the additional backside defects are not correlated with the additional frontside defects.

8. (Currently amended) The method of claim 1, wherein said determining comprises comparing coordinates defining a location of the backside defect with coordinates defining a location of the frontside defect to determine if the portion of the backside defect on the backside of the specimen is opposite to the portion of the frontside defect on the frontside of the specimen.

9. (Original) The method of claim 8, further comprising altering the coordinates defining the location of the backside defect or the coordinates defining the location of the frontside defect prior to said comparing such that the locations of the backside defect and the frontside defect are defined as if the frontside and backside defects were detected on the same side of the specimen.

10. (Original) The method of claim 1, further comprising classifying the backside defect.

11. (Original) The method of claim 1, further comprising classifying the backside defect and determining a root cause of the backside defect from data representing processing history of the specimen.

12. (Original) The method of claim 1, further comprising classifying the backside defect and determining parameters for classifying the frontside defect from the classification of the backside defect.

13. (Original) The method of claim 1, further comprising classifying the backside defect and determining a root cause of the frontside defect from the classification of the backside defect.

14. (Original) The method of claim 1, further comprising classifying the backside defect and altering a parameter of a process tool in response to the classification.

15. (Original) The method of claim 1, further comprising altering a parameter of a process tool in response to the backside defect to reduce occurrence of the frontside defect on additional specimen processed in the process tool.

16. (Currently amended) A computer-implemented method, comprising:

determining if a backside defect detected on a backside of a specimen and a frontside defect detected on a frontside of the specimen satisfy one or more proximity criteria; and

correlating the backside defect with the frontside defect if the backside defect and the frontside defect satisfy the one or more proximity criteria.

17. (Original) The method of claim 16, further comprising defining the backside defect as a geometrical figure having lateral dimensions larger than the backside defect, wherein the one or more proximity criteria are satisfied if at least a portion of the geometrical figure is opposite to at least a portion of the frontside defect.

18. (Previously presented) The method of claim 16, further comprising defining the frontside defect as a geometrical figure having lateral dimensions larger than the frontside defect, wherein

the one or more proximity criteria are satisfied if at least a portion of the geometrical figure is opposite to at least a portion of the backside defect.

19. (Original) The method of claim 16, wherein the one or more proximity criteria are satisfied if at least a portion of the backside defect is opposite to at least a portion of the frontside defect.

20. (Currently amended) A computer-implemented method, comprising:

analyzing data representing spatial characteristics of backside defects detected on a specimen to classify the backside defects;

determining if data generated during detection of the backside defects is representative of a signature of a chuck of a process tool;

removing the data representative of the chuck from data generated during detection of the backside defects;

determining if a portion of one of the backside defects detected on a backside of the specimen is opposite to a portion of a frontside defect detected on a frontside of the specimen; and

correlating the one of the backside defects with the frontside defect if the portion of the one of the backside defects is determined to be opposite to the portion of the frontside defect.

21. (Original) The method of claim 20, wherein said analyzing comprises spatial signature analysis of the data.

22. (Canceled)

